

6.1. Conservation and Environmental Programs Overview

USDA conducts a broad range of conservation programs intended to protect natural resources and the environment from the adverse consequences of agricultural production. Recently, the Federal Agriculture Improvement and Reform Act of 1996 modified and extended a number of these programs, and consolidated four cost-sharing programs into a new Environmental Quality Incentives Program (EQIP). The 1996 Act also created several new conservation programs intended to protect wildlife and grazing lands, and to reduce economic losses in floodplains. In 1996, USDA's conservation program expenditures represented half of total Federal conservation and environmental spending affecting agricultural lands, and over half of USDA's conservation expenditures were for rental or easements payments on lands in conserving uses.

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Since the 1930's, USDA has administered a broad range of conservation and environmental programs to assist farmers, ranchers, and landowners in conserving and improving soil, water, and other natural resources associated with agricultural land. Current USDA conservation programs follow one or more of the following basic policy approaches:

- Technical assistance and extension education,
- Cost-sharing assistance for practice installation,
- Public works project activities,
- Rental and easement payments to place land into conservation uses,

- Compliance provisions, which require the implementation of approved conservation plans or the avoidance of certain land use changes if the operator wishes to remain eligible for USDA program benefits, and
- Conservation data and research aimed at developing an information base and improving conservation practices and program delivery.

The first two approaches are used to some degree in most USDA conservation programs, but are most prevalent in the new Environmental Quality Incentives Program (EQIP) and the programs it replaced. The third approach—public works project activities—is used for watershed protection and flood prevention

activities. The fourth approach—payments for placing lands in conserving uses—has been used at various times in the past, such as the “Soil Bank” program of the late 1950’s, and currently characterizes the Conservation Reserve (CRP) and Wetlands Reserve (WRP) Programs. The compliance approach to conservation originated in the 1985 Food Security Act with the conservation compliance, sodbuster, and swampbuster provisions. This approach essentially adds soil and wetland conservation as additional requirements for receipt of a wide array of farm program payments. The sixth approach—research and data development—is essential to the other five approaches and is undertaken by the Agricultural Research Service (ARS), the Cooperative State Research, Education, and Extension Service (CSREES), the Economic Research Service (ERS), the Forest Service (FS), and the Natural Resources Conservation Service (NRCS).

For the most part, the Federal Government has not employed direct regulation to deal with nonpoint source natural resource and environmental problems associated with agricultural lands. (The conservation compliance, sodbuster, and swampbuster provisions are not regulatory since they apply only to those who participate in farm programs, and farm program participation is voluntary.) However, the Environmental Protection Agency (EPA) does regulate the production and use of pesticides under FIFRA, as amended by the Food Quality Protection Act, and animal waste discharges from large confined livestock operations under the Clean Water Act. An increasing number of States also regulate pesticide use and land-use practices. Voluntary approaches to agricultural resource problems not only avoid the inherent difficulty in regulating nonpoint sources of pollution, but also educate and fund farmers so that they might willingly make improvements in production practices to achieve conservation and environmental goals. In passing the Federal Agriculture Improvement and Reform Act of 1996 (1996 Farm Act), Congress reaffirmed its preference for dealing with agricultural natural resource problems through voluntary approaches.

New USDA Conservation Programs

Environmental Quality Incentives Program

(EQIP). EQIP was established by the 1996 Farm Act as a new program to consolidate and better target the functions of the Agricultural Conservation Program (ACP), the Water Quality Incentives Program (WQIP), the Great Plains Conservation Program (GPCP), and the Colorado River Basin Salinity Program (CRBSP). These four terminated programs

are discussed more in the next section. EQIP will be administered by NRCS with the concurrence of the Farm Service Agency (FSA).

The objective of EQIP is to encourage farmers and ranchers to adopt practices that reduce environmental and resource problems. By statute, half of the available funds for EQIP are to be targeted at conservation practices relating to livestock production, and there is general statutory guidance to manage EQIP so as to maximize environmental benefits per dollar expended. During 1996-2002, USDA will provide technical assistance, education, cost-sharing, and incentive payments to producers who enter into 5- to 10-year contracts implementing EQIP conservation plans. The program will be available to farmers and ranchers who own or operate land on which crops or livestock are produced, including cropland, pasture, rangeland, and other lands identified by the Secretary.

Producers who implement land management practices (e.g. nutrient management, tillage management, grazing management) can receive technical assistance, education, and incentive payment amounts to be determined by the Secretary. Producers that implement structural practices (e.g. animal waste management facilities, terraces, filterstrips) can receive technical assistance, education, and cost-sharing of up to 75 percent of the projected cost of the practice(s). However, large confined livestock operations generally will be ineligible for cost sharing to construct animal waste management facilities.

An evaluation and selection process is being used to target EQIP funds. First, NRCS solicits priority area proposals from local work groups through the State Conservationist. These proposals are evaluated at the national level, and based on the proposals and other information on conservation needs, EQIP funds are allocated to the States. Once allocations are made, it is the responsibility of the State Conservationist to see that environmental benefits per dollar are maximized. Nearly 600 project area proposals were submitted to the national level in FY 1997.

Some producers outside priority areas may also receive EQIP assistance, especially for low-cost but environmentally effective practices such as nutrient testing. USDA has proposed that up to 35 percent of EQIP funds be available for identified problems outside priority areas.

Program funding for EQIP will be \$200 million annually through 2002 except for fiscal year 1996 when funding was \$130 million. Congress authorized this \$130 million to be paid out through ACP, WQIP,

GPCP, and CRBSP to fulfill EQIP purposes. In general, cost-share and incentive payments paid to a producer under EQIP may not exceed \$10,000 for any fiscal year or \$50,000 for a multi-year contract. However, the Secretary has the authority to pay a producer more if it is determined to be essential to the purposes of the program.

Wildlife Habitat Incentives Program (WHIP). WHIP was created by the 1996 Farm Act to provide cost-sharing assistance to landowners for developing habitat for upland wildlife, wetland wildlife, threatened and endangered species, fish, and other types of wildlife. The 1996 Farm Act authorized a total of \$50 million from CRP funds to conduct the program for fiscal years 1996-2002. NRCS will administer the program.

With the assistance of NRCS, participating landowners will develop plans that include schedules for installing wildlife habitat development practices and requirements for maintaining the habitat for the life of the agreement. Agreements will last a minimum of 10 years from the date the practices are established. Cost-share payments may be used to establish practices needed to meet the objectives of the program, and replace practices that fail for reasons beyond the landowner's control.

Conservation Farm Option (CFO). The 1996 Farm Act established CFO pilot programs for producers of wheat, feed grains, cotton, and rice. NRCS will administer CFO with the concurrence of FSA. Only owners or operators with contract acreage enrolled in the Agricultural Market Transition Program are eligible for participation. Under the pilot programs, producers can receive one consolidated annual USDA conservation payment in lieu of separate payments from CRP, WRP, and EQIP. The producer must implement a conservation farm plan that addresses soil, water, and related resources, water quality, wetlands, and/or wildlife habitat. Participation is voluntary and based upon a 10-year contract between the Commodity Credit Corporation (CCC) and the producer, with a potential 5-year extension. The 1996 Farm Act authorized funding for fiscal 1997 at \$7.5 million, increasing to \$62.5 million in 2002. A total of \$197.5 million of CCC funds is dedicated to this option for FY 1997-2002. However, Congress subsequently limited the program to \$2 million for 1997 in the 1997 Agricultural Appropriations Act. USDA is expected to issue program regulations by late summer, 1997.

Farmland Protection Program (FPP). FPP was established by the 1996 Farm Act to purchase

voluntary conservation easements or other interests in lands with prime, unique, or other highly productive soils. NRCS will administer FPP with the concurrence of FSA. To be eligible, land must be subject to a pending offer from a State, tribe, or local government for the purposes of protecting topsoil by limiting nonagricultural uses of the land. The Farm Act authorized up to \$35 million of CCC funds to carry out this program.

In 1996, States, Indian tribes, and local governments offered 628 proposed easements covering over 175,000 acres of land in 20 States. The proposals had a total projected easement cost of \$330 million. Of this amount USDA was asked to provide \$130 million. USDA has evaluated these proposals and has issued cooperative agreements to allocate \$14.5 million from the CCC for fiscal year 1996. The program is limited to \$2 million in the FY 1997 Appropriations Act.

Flood Risk Reduction Program. The 1996 Farm Act authorized USDA to offer flood risk reduction contracts to producers with frequently flooded contract acreage under the Agricultural Market Transition Act. FSA will administer this program. Individuals can receive up to 95 percent of projected production flexibility contract payments, under the Agricultural Market Transition Act, that the USDA estimates the producer would otherwise have received from the time of the contract through September 30, 2002. In return, producers must agree to the termination of their production flexibility contract, comply with swampbuster and conservation compliance provisions, and forgo future disaster payments, crop insurance payments, conservation program payments, and loans for contract commodities, oilseeds, and extra long staple cotton. Flood risk reduction funding is also provided through the CCC.

Conservation of Private Grazing Land Initiative. The 1996 Farm Act required USDA to conduct, subject to the availability of appropriated funds, a coordinated technical, educational, and related assistance program for owners and managers of non-Federal grazing lands including rangeland, pastureland, grazed forest land, and hay land. NRCS will conduct this Initiative. The Initiative builds on the growing public awareness of the importance of private grazing lands, which comprise nearly 642 million acres, or half the Nation's 1.4 billion acres of private land. Working through local conservation districts, the purpose of the program is to preserve water quality, improve wildlife and fish habitat, help with weed and brush problems, enhance recreational

opportunities, and improve aesthetics. The 1996 Farm Act authorized appropriations of \$20 million in FY 1996 (subsequently limited to \$10 million), \$40 million in FY 1997, and \$60 million in FY 1998 and each subsequent year.

USDA Conservation Programs Terminated by the 1996 Farm Act

Agricultural Conservation Program (ACP). Initiated in 1936 and administered by the Farm Service Agency (FSA, formerly Agricultural Stabilization and Conservation Service), ACP provided cost-sharing (up to \$3,500 annually or \$35,000 under 10-year agreements) and technical assistance to farmers who carried out approved conservation and environmental protection practices on agricultural land and farmsteads. During the past 20 years, outlays generally ran between \$175 million and \$200 million each year. The number of participants gradually declined from more than 300,000 annually in the mid-1970's to some 85,000 farmers in 1995 (table 6.1.1). Since the 1980s, an increasing amount and proportion of cost-sharing was directed to water quality practices (including those in Water Quality Program activities). In 1995, 27 percent of ACP cost-sharing went for water quality practices, up from 7 percent in 1988 (table 6.1.2). A new practice, Integrated Crop Management (ICM), was made available under ACP in 1990 and was applied on 341,000 acres in 1995. The practice includes pest scouting, nutrient testing, and other improved management practices. Authority for ACP terminated on April 4, 1996, when its functions were subsumed by EQIP, although ACP expenditures from previously obligated funds will continue to service prior long-term agreements.

Water Quality Incentive Projects (WQIP). WQIP was created by the Food, Agriculture, Conservation and Trade Act of 1990, and was administered as a practice under ACP. The goal of WQIP was to reduce agricultural pollutants by subsidizing farm management practices that restore or enhance water resources affected by agricultural nonpoint source pollution. Areas eligible for WQIP included watersheds identified by States as being impaired by nonpoint source pollution under Section 319 of the Clean Water Act; areas identified by State agencies for environmental protection and so designated by the Governor; and areas where sinkholes could convey runoff directly into groundwater. A total of 242 projects were started during FY 1993-95.

Eligible producers entered into 3- to 5-year agreements with USDA to implement approved

management practices on their farm, as part of an overall water quality plan, in return for an incentive payment. The WQIP supported 39 different practices for protecting water quality. In 1995, WQIP assistance was applied on over 800,000 acres at an average incentive payment of nearly \$8 per acre. WQIP was consolidated into EQIP by the 1996 Farm Act.

Great Plains Conservation Program (GPCP). GPCP, initiated in 1957 and administered by NRCS, has provided technical and financial assistance in 556 counties in the 10 Great Plains States for conservation treatment on entire operating units. Financial cost-share assistance of up to 75 percent was limited to \$3,500 per person per year. Contracts were 3 to 10 years in length. In 1995, over 7,400 farms were active in the program, covering nearly 16 million acres (table 6.1.1). GPCP was terminated on April 4, 1996, when its functions were subsumed by EQIP.

Colorado River Salinity Control Program (CRSCP). Initiated in 1984, CRSCP was jointly administered by USDA and the U.S. Department of the Interior to identify salt source areas in the Colorado River Basin; assist landowners and farm operators in installing practices to reduce salinity in the Colorado River; carry out research, education, and demonstration activities; and monitor and evaluate the activities being performed. Farmers could receive up to 70 percent cost-sharing to install improved irrigation systems designed to increase irrigation efficiency and to reduce the movement of salt into groundwater. Total payments were limited to \$100,000 per farm. Once an application was approved, landowners entered into a contract for 3 to 10 years. Besides agreeing to build and install the salinity control project, the landowner also agreed to operate and maintain the project. In 1995, CRSCP had 597 participants receiving an average of \$38,000 (table 6.1.1). CRSCP was consolidated into EQIP under the 1996 Farm Act, although expenditures will continue to service prior contracts.

Ongoing USDA Conservation Programs¹

Conservation Technical Assistance (CTA). Since 1936, CTA, administered by NRCS through local Conservation Districts, has provided technical assistance to farmers for planning and implementing soil and water conservation and water quality practices. Farmers adopting practices under USDA conservation programs and other producers who ask

¹ Water quality programs, the Conservation Reserve Program, Conservation Compliance, and wetland programs are discussed in subsequent chapters.

Table 6.1.1—Status of selected USDA conservation programs, fiscal 1989-95

Program ¹	1989	1990	1991	1992	1993	1994	1995
Agricultural Conservation Program:							
Number of participants (thousand)	124.4	123.8	123.9	120.2	114.9	122.4	84.8
Average assistance per participant (\$) ²	1,480	1,608	1,470	1,580	1,685	1,659	1,679
% technical / % cost-sharing ⁴	6/94	6/94	6/94	6/94	6/94	6/94	10/90
Conservation Technical Assistance:							
Cooperators assisted (million)	1.3	1.8	1.2	1.2	1.2	1.0	0.7
Cooperators applying practices (million)	1.0	0.4	0.9	0.5	0.5	0.4	0.3
Resource management system acres (million)	25.2	27.4	18.4	18.0	15.9	16.5	17.8
Acres serviced by CTA (million)	62.6	60.7	59.6	59.6	62.1	57.2	37.0
Extension Education:							
Water Quality Program FTE ³	NA	NA	NA	698	711	748	764
(% of total)				(4.3%)	(4.5%)	(4.7%)	(4.9%)
Sustainable Agr. Initiative FTE	NA	NA	NA	634	635	623	640
(% of total)				(4.0%)	(4.0%)	(3.9%)	(4.1%)
Great Plains Conservation Program:							
Total active contracts (whole farm units)	5,129	5,443	5,779	6,336	6,761	6,761	7,419
New contracts during year	953	971	1,047	1,185	1,129	1,166	483
Applications awaiting funding	1,725	1,909	2,580	2,680	2,599	2,599	2,551
Acres under active contracts (million)	15.2	16.6	15.1	19.4	19.9	15.7	15.8
Counties covered in 10 States	518	518	518	556	556	556	556
Avg. cost/new contract (\$1,000) ²	21	22	23	21	22	22	22
% technical / % cost-sharing	40/60	38/62	33/67	36/64	35/65	35/65	35/65
Forestry Incentives Program:							
Number of participants	5,048	4,760	5,417	5,179	5,467	5,614	4,520
Acres treated (1,000)	198	187	215	208	214	227	166
Average assistance per acre ²	\$62	\$61	\$63	\$61	NA	\$54	\$56
Average assistance per participant/year ²	\$2,436	\$2,394	\$2,511	\$2,452	\$2,268	\$2,423	\$2,276
% technical / % cost-sharing	10/90	11/89	9/91	10/90	10/90	10/90	10/90
Emergency Conservation Program:							
Number of farms assisted	4,861	8,958	6,877	4,907	4,929	12,515	9,227
Acres served (million)	2.5	1.1	1.0	1.0	1.4	0.93	0.87
Avg. assistance per acre ²	\$3	\$17	\$9	\$11	\$31	\$41	\$33
Colorado River Salinity Control Program:							
Participants	127	172	214	349	527	517	597
States with participants	3	3	3	3	3	3	3
Avg. assistance per participant (\$1,000) ²	43	60	69	42	26	28	38
Conservation Loans and Easements:							
Soil and water loans:							
(million \$)	5.9	6.1	5.5	2.7	2.3	3.7	0
(number)	360	247	206	138	123	157	0
Conservation easements	266	388	114	84	120	167	69
Acres in easements	20,980	33,280	10,310	8,340	17,580	24,380	5,690
Properties transferred for conservation purpose--							
Number	14	9	141	73	79	54	56
Acres	4,047	8,954	50,447	21,692	21,090	13,392	13,351
Small Watershed Program:							
Projects authorized for planning	18	18	11	35	33	33	17
Projects authorized for installation	19	19	23	11	22	22	17
Obligations for planning (million \$)	8.4	8.6	8.9	9.2	9.5	11.1	10.5
Obligations for installation (million \$)	137.0	130.1	140.8	144.2	158.3	179.9	71.8
Resource Conservation and Development Program:							
Active areas (number)	189	194	209	236	250	275	277
State and local funding (million \$)	NA	108.1	160.5	131.1	75.1	43.5	20.8
State and local funding per Federal \$	NA	\$3.96	\$5.37	\$4.03	\$2.31	\$13	\$14

NA = Not available. ¹ For Federal expenditures on technical and cost-sharing assistance, see table 6.1.3.

² Includes both technical and cost-sharing assistance. ³ Full-time equivalents.

⁴ Technical assistance paid from ACP funding. In addition, NRCS used funds appropriated for conservation operations to finance ACP-related technical assistance.

Source: USDA, ERS, based on annual program reports of the various agencies and Office of Budget and Program Analysis data.

Table 6.1.2—Agricultural Conservation Program (ACP) expenditures by primary purpose, fiscal 1988-95

Primary purpose	Cost-share expenditures							Percent of total						
	1988	1990	1991	1992	1993	1994	1995	1988	1990	1991	1992	1993	1994	1995
	----- \$million -----							----- Percent -----						
Erosion control	133.8	112.2	111.5	106.3	93.7	107.0	70.1	71.2	64.7	61.7	58.9	55.6	55.9	51.3
Water conservation	27.7	24.7	23.6	22.8	22.5	25.0	17.3	14.7	14.3	13.0	12.6	13.3	13.1	12.7
Surface water quality (SWQ):														
Sediment	1.7	3.5	4.9	5.9	5.7	5.9	4.8	0.9	2.0	2.7	3.3	3.4	3.1	3.5
Animal waste	6.8	13.8	18.4	20.5	20.9	24.9	20.6	3.6	7.9	10.2	11.3	12.4	13.0	15.1
Fertilizer	1.4	2.8	4.8	5.8	5.9	8.1	6.5	0.7	1.6	2.7	3.2	3.5	4.3	4.7
Toxics	0.4	0.3	0.6	1.1	1.1	1.7	1.8	0.2	0.2	0.3	0.6	0.7	0.9	1.3
Salinity	2.4	1.2	0.8	0.9	1.0	1.1	1.1	1.3	0.7	0.4	0.5	0.6	0.6	0.8
Other SWQ	0.7	0.8	1.0	2.5	3.3	2.5	1.7	0.4	0.5	0.6	1.4	2.0	1.3	1.3
Subtotal SWQ	13.4	22.4	30.5	36.7	38.0	44.2	36.6	7.1	12.9	16.9	20.3	22.6	23.1	26.8
Ground water quality	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2
Energy	0.9	1.1	1.2	1.2	1.4	1.5	1.4	0.5	0.6	0.7	0.7	0.8	0.8	1.0
Wildlife	1.3	1.3	1.5	1.4	1.1	1.4	1.0	0.7	0.7	0.8	0.8	0.7	0.7	0.8
Wood production	9.1	9.9	10.9	10.2	9.8	10.1	8.4	4.8	5.7	6.0	5.7	5.8	5.3	6.1
All other	1.5	1.5	1.2	1.5	1.9	1.8	1.5	0.8	0.9	0.7	0.8	1.1	0.9	1.1
Total ¹	188.0	173.4	180.8	180.5	168.7	191.3	136.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ These data differ slightly from the more recent information in table 6.1.3, but are the only available source of expenditures by primary purpose.
Source: USDA, ERS, based on ASCS, Annual Statistical Summaries of the Agricultural Conservation Program.

for assistance in adopting approved NRCS practices can receive technical assistance. In 1995, CTA provided assistance to approximately 700,000 cooperators on about 37 million acres (table 6.1.1), down from earlier years. In recent years, CTA has prepared and assisted in implementing conservation plans for highly erodible lands to help farmers maintain eligibility for USDA program benefits.

Water Bank Program (WBP). Authorized in 1970, the WBP is primarily designed to preserve, restore, and improve high-priority wetlands. In the process, WBP also provides habitat for migratory waterfowl and other wildlife, improves water quality, reduces soil erosion, conserves surface waters, improves subsurface moisture, contributes to flood control, and enhances the natural beauty of the landscape. Under the WBP, USDA enters into agreements with landowners and operators in important migratory waterfowl nesting, breeding, and feeding areas for the conservation of specified wetlands. The agreements are for 10 years with provision for renewal. The program operates primarily in the northern part of the central flyway, and the northern and southern parts of the Mississippi flyway. Until 1994, the WBP was administered by FSA, after which the program became the responsibility of NRCS. In 1995, approximately 700,000 acres were in the program with annual payments of nearly \$10 million. North Dakota, Mississippi, Arkansas, and South Dakota had the most acres enrolled of 12 States.

Congressional appropriators eliminated funding for the WBP in FY 1995, reflecting deficit reduction pressures. As a result, payments to farmers end as their 10-year contracts expire and no additional acres can be enrolled in the program. However, certain lands subject to expiring WBP contracts are eligible for possible enrollment in the CRP.

Emergency Conservation Program (ECP). ECP was initiated in 1978 and is administered by FSA. The program provides financial assistance to farmers in rehabilitating cropland damaged by natural disasters and for conserving water during severe drought. There is a payment limit of \$200,000 per person per disaster. Expenditures jumped in 1993-95 as a result of numerous hurricanes, floods, drought, and tornados (table 6.1.3).

Emergency Watershed Protection Program. This program was initiated in 1950 and is administered by NRCS. It provides technical and financial assistance to local institutions for removal of storm and flood debris from stream channels and for restoration of stream channels and levees to reduce threat to life and property. Local institutions receiving aid must contribute 25 percent of total cost. Expenditures in 1994 and 1995 rose because of special appropriations to help the Midwest recover from the 1993 flood.

Extension Education. The Cooperative State Research, Extension, and Education Service

Table 6.1.3—USDA conservation expenditures, by activity and program, fiscal years 1983-97¹

Activity/program	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995 actual	1996 approp.	1997 ² request
1. Technical assistance, extension, and administration:															
Natural Resources Conservation Service (NRCS)	\$ million ¹														
Conservation Technical Assistance (CTA)	276.9	293.7	302.0	286.7	332.0	366.4	386.7	396.7	426.5	477.9	515.2	523.2	500.0	538.9	565.4
Great Plains Conservation Program (GPCP)	9.1	9.1	9.1	8.9	9.1	8.7	8.2	8.0	8.3	9.1	8.9	9.3	9.1	0.0	0.0
Resource Conservation & Development (RC&D)	16.3	16.3	17.8	17.4	17.8	18.2	18.4	23.1	24.2	26.0	29.9	28.3	30.4	29.0	29.4
Small Watershed Program (planning)	8.9	8.7	8.9	8.5	8.7	8.7	8.7	8.8	9.2	9.5	9.5	10.9	10.5	5.6	7.7
Watershed Protection / Flood Prevention	101.6	75.7	76.9	77.8	68.1	67.7	65.9	63.2	70.3	74.3	80.4	77.9	70.0	60.0	76.0
Colorado River Salinity Control Program	0.0	0.0	0.0	0.0	1.4	1.8	2.0	4.4	5.9	5.9	5.5	5.5	3.9	0.3	0.2
Forestry Incentives Program (FIP)	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	0.7	0.6	0.6
Water Bank Program (WBP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	1.1	1.1	0.4	0.0	0.0	0.0
Wetland Reserve Program (WRP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	3.5	8.8	6.0	17.0
Subtotal NRCS	414.0	404.8	416.0	400.5	438.2	472.6	491.2	506.0	546.4	605.0	656.7	660.3	633.4	640.4	696.2
Farm Service Agency (FSA)															
Agricultural Conservation Program (ACP)	11.0	11.2	11.2	10.5	9.3	11.2	10.1	11.3	10.6	10.8	11.2	11.7	6.0	4.5	4.5
Conservation Reserve Program (CRP)	0.0	0.0	0.0	10.8	21.9	5.6	27.9	16.4	5.7	11.4	8.9	4.7	5.3	6.6	21.4
Emergency Conservation Program (ECP)	0.1	0.7	0.6	0.2	0.1	0.2	0.4	0.6	0.5	0.8	1.5	1.0	1.8	0.0	0.0
Rural Clean Water Program (RCWP)	-0.9	0.3	0.0	3.4	2.5	0.0	-0.7	0.9	0.8	0.4	0.0	0.0	0.0	0.0	0.0
FSA salaries & expenses, conservation	32.8	35.3	33.1	37.3	47.6	61.4	62.4	60.2	73.8	72.6	65.3	67.6	62.8	62.8	62.8
Subtotal FSA	43.0	47.4	44.9	62.0	81.4	78.4	100.1	89.4	91.4	96.1	87.0	85.0	75.9	73.9	88.7
Extension Service (ES) conservation activities	15.9	16.0	16.4	16.3	15.7	18.1	19.8	23.5	29.4	31.1	31.1	32.2	32.2	31.7	31.7
Forest Service (FS)															
Forest Stewardship	10.3	6.9	6.9	6.7	7.1	6.8	6.8	15.2	22.6	23.9	23.3	25.8	25.9	23.4	30.0
Economic Action Programs	2.6	1.2	1.0	0.9	1.0	2.0	1.0	4.2	10.2	15.2	13.7	15.5	16.0	14.5	15.0
Forest Legacy Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	9.9	6.9	0.0	3.0	3.0
Pacific Northwest Assistance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.4	17.1	16.0	13.0
Urban and Community Forestry	1.5	1.6	2.0	1.9	1.9	2.0	2.5	2.8	21.1	23.8	24.8	27.0	28.3	25.5	26.0
Subtotal Cooperative Forest Conservation	4.1	2.8	2.9	2.8	3.0	4.0	3.5	6.9	31.2	44.0	48.4	65.9	61.4	59.0	57.0
Subtotal FS	14.4	9.7	9.8	9.5	10.0	10.8	10.3	22.1	53.8	67.9	71.7	91.7	87.3	82.4	87.0
Subtotal Tech. asst., ext., and admin.	487.4	477.9	487.1	488.4	545.4	579.9	621.3	641.1	721.1	800.1	846.4	869.2	828.8	828.5	903.7
2. Cost-sharing for practice installation:															
FSA															
Agricultural Conservation Program (ACP)	176.5	174.5	179.2	129.7	172.6	186.6	174.0	187.8	171.6	179.1	182.8	183.0	94.0	70.5	70.5
Conservation Reserve Program (CRP)	0.0	0.0	0.0	12.4	245.6	284.8	182.3	118.1	40.9	39.3	32.0	14.5	3.7	25.1	66.1
Emergency Conservation Program (ECP)	13.9	16.4	4.9	6.6	5.3	5.7	6.1	17.9	8.8	10.3	42.0	24.0	21.2	0.0	0.0
Rural Clean Water Program (RCWP)	2.5	0.0	1.9	10.6	0.0	2.1	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal FSA	193.0	190.9	185.9	159.3	423.5	479.3	363.1	324.1	221.3	228.7	256.8	221.5	118.9	95.6	136.6

--Continued

Table 6.1.3—USDA conservation expenditures, by activity and program, fiscal years 1983-97¹, continued

Activity/program	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995 actual	1996 approp.	1997 ² request
	\$ million ¹														
FS Stewardship Incentives Program (SIP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.9	0.8	17.8	17.9	18.3	4.5	20.0
NRCS															
Colorado River Salinity Control Program	0.0	0.0	0.0	0.0	2.5	3.1	3.4	6.0	8.9	8.8	8.2	8.2	0.6	2.4	2.5
Forestry Incentives Program (FIP)	11.3	11.1	11.5	9.8	10.7	10.6	11.1	10.2	12.4	11.5	11.2	11.5	6.0	5.7	5.7
Great Plains Conservation Program (GPCP)	12.2	12.3	12.5	11.5	11.4	11.8	12.2	12.9	16.4	16.2	16.4	16.4	6.1	0.0	0.0
Wetland Reserve Program (WRP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.4	9.9	8.0	20.6
Subtotal NRCS	23.6	23.4	24.0	21.4	24.6	25.5	26.7	29.1	37.6	36.5	35.8	43.5	22.5	16.1	28.7
Subtotal Cost-sharing	216.5	214.3	209.9	180.7	448.1	504.8	389.9	353.2	278.8	266.0	310.4	282.9	159.7	116.2	185.4
3. Public works project activities (NRCS):															
Emergency Watershed Protection	22.5	22.0	5.0	79.7	14.8	13.5	10.0	94.9	20.0	70.0	73.1	133.2	290.6	0.0	15.0
Flood Prevention (operations)	22.7	9.9	13.9	19.1	11.5	11.3	12.8	16.0	12.8	21.4	23.8	22.9	0.0	6.0	0.0
Resource Conservation and Development (RC&D)	14.4	9.7	8.5	7.7	7.2	7.06.7	4.2	5.7	6.5	2.6	4.6	2.5	0.0	0.0	
Small Watershed Program (operations)	160.6	87.6	88.0	80.8	82.7	83.4	83.7	81.7	82.6	89.6	101.3	106.9	0.0	34.0	40.0
Subtotal NRCS public works projects	220.3	129.1	115.4	187.3	116.2	115.2	113.2	196.8	121.1	187.5	200.8	267.6	293.1	40.0	55.0
4. Rental and easement payments (FSA & NRCS):															
Conservation Reserve Program (CRP)	0.0	0.0	0.0	0.0	410.0	760.1	1162.1	1393.7	1590.1	1612.5	1510.0	1728.8	1711.7	1750.0	1837.3
Water Bank Program (WBP)	8.8	8.8	8.8	8.4	8.4	8.4	9.0	12.2	13.1	17.1	17.1	7.4	0.9	0.0	0.0
Wetland Reserve Program (WRP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	86.9	78.8	58.0	150.5
Subtotal rental and easement payments	8.8	8.8	8.8	8.4	418.4	768.5	1171.1	1406.0	1603.2	1629.6	1531.5	1823.0	1791.4	1808.0	1987.7
5. Conservation data and research:															
Agricultural Research Service	63.5	63.7	63.7	62.4	59.3	60.5	65.9	73.6	73.6	73.9	74.3	76.7	75.5	76.1	79.7
Cooperative State Research Service	27.9	29.6	32.8	31.3	31.0	33.1	34.5	40.6	50.6	53.9	49.8	48.0	50.1	48.2	45.6
Economic Research Service	5.0	7.7	5.4	4.0	4.0	3.1	3.0	4.6	5.5	5.8	6.3	5.0	5.0	5.0	5.0
Forest Service (forest research)	107.7	109.4	121.7	120.1	132.7	135.5	138.3	150.9	167.6	180.5	182.7	195.0	193.5	178.0	179.8
National Agricultural Library (water quality)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
NRCS programs															
River basin surveys	16.4	15.6	14.9	14.2	12.1	12.1	12.1	12.3	12.8	13.3	13.3	13.5	13.0	8.4	11.5
Soil surveys	51.4	53.5	54.8	54.3	58.2	67.7	68.2	68.1	69.8	72.6	72.6	73.9	72.6	76.6	77.7
Plant materials centers	3.8	4.0	4.1	3.9	4.6	4.9	5.0	7.2	7.9	8.1	8.1	8.9	8.1	8.9	9.0
Snow surveys	3.8	3.9	4.0	3.8	5.0	5.4	5.5	5.4	5.6	5.7	5.7	5.8	5.6	5.9	5.9
Subtotal NRCS	75.47	77.02	77.78	76.19	79.74	90.00	90.79	92.98	96.03	99.58	99.58	102.10	99.32	99.73	104.03
Subtotal conservation data and research	279.5	287.4	301.3	294.0	306.8	322.2	332.5	363.0	393.7	413.9	413.0	427.2	423.7	407.3	414.4
6. Conservation compliance and sodbuster (FSA & NRCS) (expenditures are included in other programs listed above):															
USDA total	1212.5	1117.5	1122.6	1158.7	1834.8	2290.5	2627.9	2960.0	3117.8	3297.2	3302.2	3669.9	3496.8	3200.0	3546.2

¹ Derived from material provided by the Office of Budget and Program Analysis (OBPA) USDA. ² Based on Administration's request prior to passage of the 1996 Farm Act. Does not include new programs created by the 1996 Act.

(CSREES) provides information and recommendations on soil conservation and water quality practices to landowners and farm operators in cooperation with the State Extension Services and State and local offices of USDA agencies and Conservation Districts. In 1995, about 5 percent of extension education effort was directed to USDA's Water Quality Program activities, and 4 percent to sustainable agriculture (table 6.1.1).

Conservation Loans and Farm Debt Cancellation Easements. FSA provides loans to farmers for soil and water conservation, pollution abatement, and building or improving water systems. Loan activity dropped to zero in 1995, continuing a downward trend since 1990 (table 6.1.1). FSA may also acquire voluntary conservation easements as a means of helping farmers reduce outstanding loan amounts. Only 69 easements covering 5,700 acres were acquired in 1995, one-sixth the amount of 1990. FSA places conservation easements on foreclosed land being sold, or transfers environmentally sensitive lands to Federal and State agencies for conservation purposes. In 1995, FSA approved 56 property transfers for conservation purposes covering 13,351 acres.

Forestry Incentives Program (FIP). FIP was initiated in 1975 and provides cost-sharing up to 65 percent for tree planting and timber stand improvement for private forest lands of no more than 1,000 acres. Maximum payment per owner is \$10,000 annually, but payments in 1995 averaged about \$2,300 (table 6.1.1). More than 4,500 forest owners participated in the program in 1995, with 166,000 acres enrolled. NRCS administers the program and the Forest Service (FS) provides technical assistance.

Forest Stewardship Program (FSP). FSP was enacted in 1990 and is administered by the Forest Service. The program provides grants to State forestry agencies for expanding tree planting and improvement and for providing technical assistance to owners of nonindustrial private forest lands in developing and implementing forest stewardship plans to enhance multi-resource needs. A companion **Stewardship Incentive Program (SIP)**, administered by the Forest Service through FSA, provides cost-sharing up to 75 percent for practices in the approved forest stewardship plans. Payments may not exceed \$10,000 annually per landowner and practices must be maintained for at least 10 years.

Pesticide Record-Keeping. This provision established by the 1990 Farm Act requires private applicators of restricted-use pesticides to maintain records accessible

to State and Federal agencies regarding products applied, amount, and date and location of application. The requirement became effective May 10, 1993, and is administered by the Agricultural Marketing Service.

Resource Conservation and Development Program (RC&D). RC&D was initiated in 1962. Through this program, NRCS assists multicounty areas in enhancing conservation, water quality, wildlife habitat, recreation, and rural development. The program provides technical and limited financial assistance for planning and installation of approved projects. In 1995, 277 active areas existed, up slightly from 1994 (table 6.1.1). During 1994-95, \$13-\$14 of State and local funds supplemented each dollar of Federal funding, up significantly from earlier years.

Small Watershed Program. Otherwise known as PL-566, this program was initiated in 1954. It assists State agencies and local units of government in flood prevention, watershed protection, and water management. Part of this effort involves establishment of measures to reduce erosion, sedimentation, and runoff. The program provides up to 100 percent of the construction costs for structural measures with flood prevention purposes and up to 50 percent of such costs for structural measures with other purposes. The program also provides 75 percent of the installation cost for nonstructural measures. Eligible watersheds must be 250,000 acres or less in size. In 1995, 34 local projects were authorized, down from earlier years (table 6.1.1). NRCS administers the program and provides technical assistance.

Data and Research Activities. The Agricultural Research Service (ARS) conducts research on new and alternative crops and agricultural technology to reduce agriculture's adverse impacts on soil and water resources. CSREES administers competitive grants and coordinates conservation and water quality research conducted by State Agricultural Experiment Stations and land-grant universities. The Economic Research Service (ERS) estimates economic impacts of existing and alternative policies, programs, and technology for preserving and improving soil and water quality; and with the National Agricultural Statistics Service (NASS), collects data on farm chemical use, agricultural practices, and costs and returns. The Forest Service (FS) conducts research on environmental and economic impacts of alternative forest management policies, programs, and practices. NRCS conducts river basin studies, soil surveys, snow surveys, and National Resource Inventories; it also supports plant materials centers.

Table 6.1.4—Resource conservation and related programs affecting agriculture, FY 1996 estimated expenditures

Agency and program	FY 1996 estimated expenditure
	\$ Million
U.S. Department of Agriculture (USDA) programs:	
Conservation Reserve Program (CRP)	1,782
Wetlands programs	72
Water Quality Program	193
Other conservation	1,153
USDA total	3,200
U.S. Environmental Protection Agency (EPA) programs: ¹	
Water quality programs	526
Drinking water programs	184
Pesticide programs	109
EPA total	819
Army Corps of Engineers programs: ¹	
Dredge and Fill Permit Program (wetlands)	101
Flood control programs	1,252
Corps total	1,353
U.S. Department of the Interior (USDI) programs: ¹	
Range improvement	10
Water development and management	982
Water resources investigations	186
Wetlands conservation	7
Endangered species conservation	36
Natural resources research	148
USDI total	1,369
Federal total	6,741
State and local expenditures on USDA cooperative conservation programs	736

¹ Programs affect other resources as well as agriculture.

Sources: USDA, ERS, based on data from Office of Management and Budget; and USDA, Office of Budget and Program Analysis.

USDA Conservation Program Expenditures

Resource conservation and environmental programs or activities administered by USDA had estimated expenditures in FY 96 of \$3.2 billion (table 6.1.4). USDA's expenditures represent 47 percent of Federal expenditures on resource efforts affecting agriculture, estimated to be \$6.7 billion in FY 96. The other major Federal players are the U.S. Department of the Interior (USDI), the Army Corps of Engineers (Corps), and the U.S. Environmental Protection Agency (EPA). USDI and Corps programs affecting agriculture primarily deal with water resource

conservation and management, including irrigation, flood control, and wetlands. EPA administers programs dealing with surface-water quality, drinking water and groundwater protection, and use of pesticides (for more details, see box, "Other Federal Conservation and Environmental Programs That Affect Agriculture," p. 268-269, and chapters 3.2, 6.2, and 6.5).

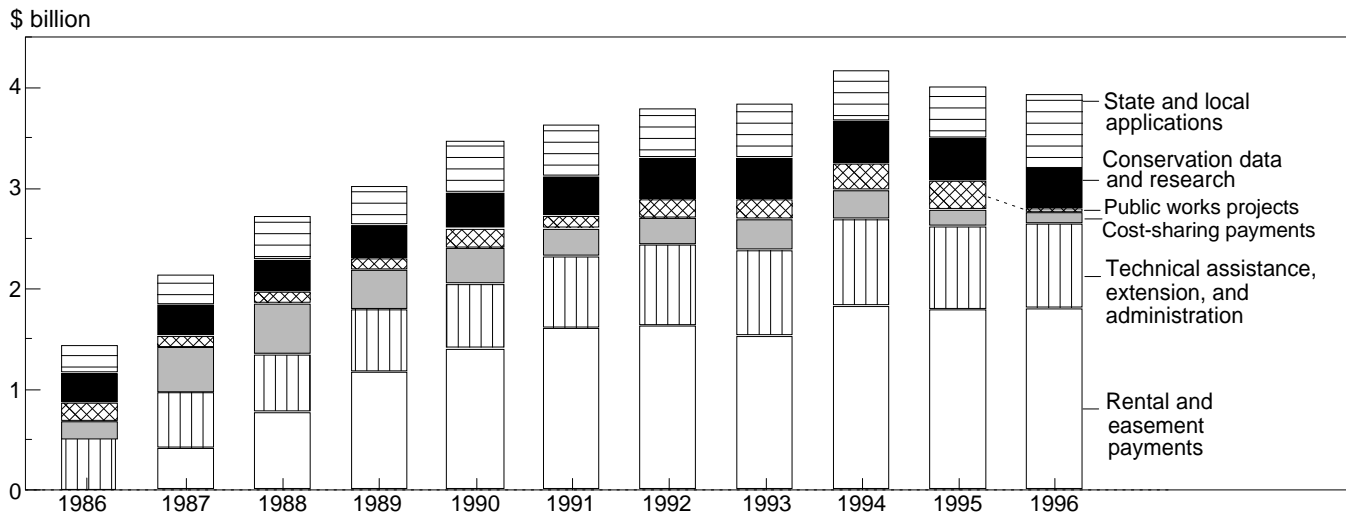
Programs administered at State and local levels also affect agriculture. All States support technical assistance for conservation and water quality through conservation or natural resource districts located at the county or multi-county level. In 1996, such support was \$736 million. Also, all States fund cooperative extension education efforts and 44 States provide various incentives for farmers to use soil and water conservation and water quality practices. States and localities also provide support for cooperative regional water quality or estuary programs (see chapter 6.2, *Water Quality Programs*, for more details on State programs).

According to a Congressional Budget Office analysis, total funding committed to resource conservation under USDA conservation programs will grow by more than \$2 billion over 1996-2002 (\$300 million per year) as a result of the 1996 Farm Act. The 1996 Farm Act added conservation and environmental protection to the mission of the CCC charter, and provided for future funding of major conservation program such as the CRP, WRP, and EQIP through mandatory CCC allocations. For the first time, this places conservation funding on equal financial footing with commodity program funding. Although USDA must still submit an annual budget request that includes expected conservation and other spending, which is subject to an overall spending limit, funding these conservation programs through CCC should reduce the uncertainty associated with annual conservation program appropriations.

USDA Expenditures on Different Conservation Policy Approaches

Spending on conservation activities by USDA and State and local governments increased steadily until 1995 when budget tightening began occurring at all levels (fig. 6.1.1). At the Federal level, funding for ACP, GPCP, and watershed programs were cut significantly and funding was eliminated for the Water Bank Program. For 1996, USDA and related State and local government expenditures for conservation were nearly \$4 billion, similar to 1995.

Figure 6.1.1--Conservation expenditures by USDA and related State and local programs, 1986-96



Source: USDA, ERS, based on Office of Budget and Program Analysis data.

Also changed has been the mix of USDA expenditures. Rental and easement payments accounted for over half of USDA conservation expenditures in 1995 (fig. 6.1.2, table 6.1.3). Since 1988, rental payments for land retired for conservation purposes have been the largest category of USDA conservation expense. The bulk of these were rental payments to participants in the Conservation Reserve Program (CRP) for land retired from production and placed into protective cover. Rental payments were also made for land enrolled in the Water Bank Program and easement payments for land accepted into the new Wetlands Reserve Program. Technical assistance and extension expenditures were \$829 million in 1995 and accounted for almost 24 percent of the USDA total for conservation purposes. Only cost-sharing for practice installation, which accounted for less than 5 percent of USDA spending in 1995, was funded well below previous levels. High expenditures for public works projects reflected emergency measures required by the 1993 Midwest flood at over 8 percent of USDA spending.

The President's budget for 1997 shows declines from 1995 for public works project activities and conservation data and research but increases for technical assistance and extension, cost-sharing, and rental and easement payments. The budgeted increase in rental payments is for land expected to go into the Wetlands Reserve and re-enrollment of environmentally sensitive lands into the CRP as existing contracts expire.

Erosion and Pollutant Reductions from USDA Conservation Programs

USDA programs contribute to farmers' increasing use of management practices that reduce soil erosion and chemical applications or loads (table 6.1.5). The Water Quality Program (WQP) and the Agricultural Conservation Program (ACP) helped farmers implement integrated crop management (ICM), nutrient management, and pesticide management. According to a General Accounting Office report, during fiscal years 1992-94, USDA supported conservation measures on an average of 71 million acres under 565,000 agreements with land users annually under 10 cost-sharing programs and 7 land retirement programs. The 10 cost-sharing programs included ACP, CRSCP, ECP, FIP, GPCP, the Rural Clean Water Program, the Small Watershed Program, Soil and Water Conservation Loan Program, SIP, and WQIP. The seven land-retirement programs included CRP, the Emergency Wetland Reserve Program, conservation easements, Forest Legacy Program, Integrated Farm Management Program Option, WBP, and WRP.

USDA conservation programs have significantly reduced erosion from 1987 levels. For example, as of early 1995, the CRP had converted 36.4 million cropland acres to protective cover, reducing annual cropland erosion by an estimated 690 million tons (table 6.1.6). This was a drop of over one-fifth in annual cropland erosion from the 1987 level of 3 billion tons (see chapter 6.3, *Conservation Reserve Program*, for more detail). Compared with 1987,

Table 6.1.5—Major practices implemented under USDA conservation programs, fiscal 1988-95

Practice and program ¹	1988	1989	1990	1991	1992	1993	1994	1995
Grass cover establishment:	<i>Million acres treated</i>							
ACP	0.65	0.61	0.58	0.61	0.59	0.53	0.71	0.38
CRP	7.36	4.27	3.02	0.33	0.79	0.78	0	0
Grass cover improvement:								
ACP	1.37	1.17	0.96	1.00	1.00	1.12	1.25	0.88
CRP	0.47	0.29	0.17	0.04	0.09	0.11	0	0
Tree planting:								
ACP	0.16	0.13	0.12	0.13	0.12	0.13	0.13	0.20
CRP	0.50	0.41	0.19	0.09	0.10	0.12	0	0
FIP	0.16	0.16	0.15	0.18	0.16	0.18	0.19	0.14
Wildlife habitat establishment:								
ACP	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02
CRP	0.39	0.31	0.65	0.01	0.01	0.01	0	0
Cropland protective cover:								
ACP	0.75	0.64	0.58	0.61	0.65	0.48	0.41	0.02
Conservation tillage:								
ACP	0.45	0.33	0.43	0.41	0.56	0.60	0.53	0.21
WQP regional activities	NA	NA	NA	0.42	0.48	NA		
Strip cropping systems: ACP	0.14	0.12	0.15	0.12	0.10	0.08	0.07	0.05
Integrated crop management: ACP	--	--	0.03	0.20	0.28	0.32	0.38	0.34
Nitrogen management: ²								
WQP Demo projects	0	0	NA	0.01	0.22	0.46	NA	NA
WQP HUA projects	0	0	NA	0.20	0.44	0.46	NA	NA
WQP regional activities	NA	NA	NA	0.13	0.19	NA	NA	NA
Phosphorus management: ²								
WQP Demo projects	0	0	NA	0.01	0.13	0.25	NA	NA
WQP HUA projects	0	0	NA	0.07	0.43	0.25	NA	NA
Pesticide management: ²								
WQP Demo projects	0	0	NA	0.04	0.08	0.18	NA	NA
WQP HUA projects	0	0	NA	0.13	0.58	0.18	NA	NA
WQP Chesapeake Bay	NA	NA	NA	0.22	0.25	NA	NA	NA
	<i>Million acres served</i>							
Grazing land protection: ACP	3.60	3.77	4.72	3.33	3.66	2.85	2.68	2.13
Irrigation water conservation: ACP	0.82	0.77	0.69	0.77	0.69	0.80	0.85	0.52
Terraces and diversions: ACP	1.07	0.93	0.62	0.70	0.75	0.62	0.80	0.65
Water impoundments: ACP	0.27	0.27	0.22	0.19	0.14	0.14	0.12	0.09
Sediment control structure: ACP	0.25	0.22	0.21	0.22	0.20	0.18	0.19	0.16
Sod waterways: ACP	0.22	0.17	0.18	0.26	0.20	0.16	0.26	0.16
Agricultural waste systems: ²	<i>Number</i>							
ACP	1,947	1,753	2,348	2,912	3,844	4,108	4,116	3,132
WQP Demo projects	0	0	NA	123	162	NA	NA	NA
WQP HUA projects	0	0	NA	200	325	NA	NA	NA
WQP regional activities	NA	NA	NA	581	74	NA	NA	NA
Wellhead protection:								
WQP Demo projects	0	0	NA	62	463	NA	NA	NA
WQP HUA project	0	0	NA	2,304	1,553	NA	NA	NA

¹ ACP = Agricultural Conservation Program. CRP = Conservation Reserve Program. FIP = Forestry Incentives Program. HUA = Hydrologic Unit Area. WQP = Water Quality Program. No data available for programs or projects not listed.

² Some of the practices implemented in the WQP in 1991 and 1992 were cost-shared under ACP and are duplicative.

NA = Not available.

Source: USDA, ERS, based on annual reports of the various programs.

Table 6.1.6—Impacts of USDA conservation programs on erosion and chemicals, fiscal 1988-95¹

Impact and program	1988	1989	1990	1991	1992	1993	1994	1995
<i>Million tons</i>								
Erosion reduced/soil saved by:								
Conservation Reserve Program ²	514	596	644	654	672	692	692	692
Conservation compliance ³	0	0	0	NA	236	458	465	527
Agricultural Conservation Program ⁴	40	34	33	34	30	29	29	18
Conservation Technical Assistance and GPCP ^{4, 5}	463	353	353	282	298	321	325	284
Annual Acreage Reduction Program ^{4, 6}	107	62	55	60	39	46	29	40
WQP regional activities	NA	NA	NA	2	NA	NA	NA	NA
<i>Million lbs.</i>								
Nitrogen application reduced by:								
WQP Demo projects ⁴	NA	NA	NA	0.9	8.9	NA	NA	NA
WQP HUA projects ⁴	NA	NA	NA	1.7	38.5	NA	NA	NA
WQP regional activities ⁴	NA	NA	NA	8.1	5.9	NA	NA	NA
Phosphorus application reduced by:								
WQP Demo projects ⁴	NA	NA	NA	0.2	7.3	NA	NA	NA
WQP HUA projects ⁴	NA	NA	NA	1.5	57.4	NA	NA	NA
WQP regional activities ⁴	NA	NA	NA	4.4	5.8	NA	NA	NA
<i>1,000 tons</i>								
Salt load reduced by:								
Colorado River Salinity Control Program ²	62	75	92	105	127	163	191	212
<i>1,000 lbs. active ingredient</i>								
Pesticide load reduced by:								
WQP Demo projects ⁴	NA	NA	NA	48	66	NA	NA	NA
WQP HUA projects ⁴	NA	NA	NA	191	462	NA	NA	NA

NA = Not available.

¹ No data or estimates available for programs not listed. The erosion reductions are estimates based on long-term national weather patterns, and do not reflect annual variations in weather.

² All lands treated by program, including those first treated in past years with practices that are still effective.

³ Minimum estimate based on 18, 35, 46, and 54 million acres of additional lands with a conservation plan fully implemented for 1992-95 respectively, excluding land in the CRP or land eroding at or below the soil loss tolerance (T) level in 1987. The average erosion reduced was assumed to be approximately 10 tons/acre/year, based on SCS status reviews of HEL-determined fields with a fully implemented plan, excluding those in the CRP.

⁴ Reduction on lands newly treated during year only. No estimates exist of continuing reductions on lands treated in prior years.

⁵ Includes partial double counting with CRP, compliance, and ACP programs.

⁶ Assumes average reduction of 2 tons/acre/year. While this is a commodity program, idling the land and reducing cultivation preserves soil that would otherwise erode.

Source: USDA, ERS, based on annual program reports of the various agencies.

Conservation Compliance (see chapter 6.4, *Conservation Compliance*) was estimated to reduce soil erosion an additional 18 percent or 572 million tons as of 1995 (excluding acreage going into the CRP or already eroding at or below the tolerance level).

USDA programs are also reducing and improving fertilizer and pesticide use, thereby reducing chemicals entering surface and ground waters. Lands in the CRP receive lower applications of fertilizer and pesticides than if they had remained active cropland. WQP participants who implement improved nutrient management use less nitrogen and less phosphorus (table 6.1.6). Pesticide applications have also fallen.

These reductions, although insignificant compared with total use in the United States, can improve water quality in environmentally sensitive areas. The Colorado River Salinity Control Program reduced the salt load entering the river by an estimated 212,000 tons in 1995. The downstream benefits (reduction in damages caused by salinity) have been estimated to be at \$38 - \$70 annually per ton of salt reduction, or \$8 - \$15 million for 1995.

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Other Federal Conservation and Environmental Programs That Affect Agriculture

The Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers, and the U.S. Department of the Interior administer programs that affect resource use in agriculture. In some cases, these programs limit farmers' management decisions by restricting land use, chemical use, water use, and cropping practices.

EPA-Administered Programs

Clean Water Act is the Nation's most important water quality protection law. Originally passed in 1972, the Act's goal is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The Act contains a number of provisions that affect agriculture (see chapter 6.2, *Water Quality Programs*, for more detail on the following programs).

Clean Lakes Program, reauthorized by Section 314 of the Clean Water Act, authorizes EPA grants to States for lake classification surveys, diagnostic/feasibility studies, and for projects to restore and protect lakes.

Nonpoint Source Program, established by Section 319 of the Clean Water Act, requires States and U.S. territories to identify navigable waters that cannot attain water quality standards without reducing nonpoint source pollution and develop management plans to reduce nonpoint source pollution.

National Estuary Program, established by Section 320 of the Clean Water Act, provides for the identification of nationally significant estuaries that are threatened by pollution; for preparation of conservation and management plans; and for Federal grants to State, interstate, and regional water pollution control agencies to implement the plans.

National Pollutant Discharge Elimination System (NPDES) Permit Program, established by Section 402 of the Clean Water Act, controls point-source discharges from treatment plants and industrial facilities (including large animal and poultry confinement operations).

Coastal Nonpoint Pollution Control Programs. In 1990, amendments to the Coastal Zone Management Act, administered by the National Oceanic and Atmospheric Administration and EPA, required that States with coastal zone management programs develop and implement programs to control nonpoint sources of pollution.

Regional programs for addressing water quality problems exist as cooperative efforts among State agencies, EPA, and USDA.

Safe Drinking Water Act (SDWA) requires the EPA to set standards for drinking water quality and requirements for water treatment by public water systems. Also, SDWA requires States to establish a wellhead protection program to protect public water system wells from contamination by chemicals, including pesticides, nutrients, and other agricultural chemicals.

Pesticide programs, established by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), provide the legal basis under which pesticides are regulated. A pesticide can be restricted or banned if it poses unacceptable risks to human health or the environment. The re-registration process, mandated in 1988 for all active ingredients then on the market, has resulted in manufacturers dropping many less profitable products rather than paying the registration fees. (See chapter 3.2, *Pesticides*, for more discussion.)

Comprehensive State Ground-Water Protection Program (CSGWPP), initiated by EPA in 1991, coordinates operation of all Federal, State, tribal, and local programs that address groundwater quality. States have the primary role in designing and implementing CSGWPP's in accordance with distinctive local needs and conditions.

Continued--

Other Federal Conservation and Environmental Programs That Affect Agriculture (cont.)

U.S. Army Corps of Engineers-Administered Programs

Dredge and Fill Permit Program, established by Section 404 of the Clean Water Act, regulates dredging, filling, and other alterations of waters and wetlands, including wetlands owned by farmers. USDA has authority to make wetland determinations on agricultural land. (Discussed more in chapter 6.5, *Wetlands Programs*.)

Flood control activities include the construction, rehabilitation, and operation of dams, levees, and other facilities for flood control. An emergency supplemental appropriation in 1994 provided funds to complete repair of non-Federal levees damaged by the Midwest floods of 1993. (Discussed more in chapter 6.5, *Wetlands Programs*.)

U.S. Department of the Interior-Administered Programs

Endangered Species Act is the Nation's chief statute to conserve endangered or threatened species and their ecosystems. When a species is designated as threatened with extinction, a recovery plan is developed to protect it from further population declines. The plan could include restrictions on cropping practices, water use, and pesticide use. (Discussed more in chapter 1.2, *Land Tenure*.)

Endangered Species Conservation provides State grants for the conservation of threatened and endangered species and for monitoring the status of candidate species.

Range Improvements, including rehabilitation and protection, are undertaken by the Bureau of Land Management with a percentage of receipts from grazing of livestock on the public lands.

Water Development and Management activities in the 17 Western States by the Bureau of Reclamation include construction, rehabilitation, and operation of dams and facilities for water conservation, irrigation, municipal and industrial use, flood control, recreation, and electric power generation. (Discussed more in chapter 2.1, *Water Use and Pricing*.)

Water Resources Investigations by the U.S. Geological Survey include monitoring and appraisals of the Nation's water resources to support Federal, State, and local government decisions on water development, management, and quality; and energy development.

Wetlands Conservation includes obtaining real property interest in lands or waters, the restoration or enhancement of habitat, and training and development for wetlands management. (Discussed more in chapter 6.5, *Wetlands Programs*.)